REMARKS

Claims 1-40 are pending and under consideration. No new matter is presented in this Response.

REJECTIONS UNDER 35 U.S.C. §103:

Claims 1-40 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lee et al. (U.S. Patent 5,570,340) (hereinafter, "Lee") in view of Ohno et al (U.S. Patent 5,512,938) (hereinafter, "Ohno") in further view of Otomo et al. (U.S. 6,532,335) (hereinafter, "Otomo").

I. **The Prior Art Fails To Teach Or Suggest Each Of The Recited Limitations Of The Claimed Invention**

It is respectfully submitted that the Examiner has failed to establish a *prima facie* case of obviousness for claims 1-40 because the prior art combination of Lee, Ohno and Otomo fail to disclose each of the recited limitations of the claimed invention. "To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art." MPEP 2143.03.

Claim 1

Claim 1 recites the feature of "the first and second program descriptor tables are recorded independently of the first and second data unit descriptor tables and the first and second data units."

As previously argued by the applicants in the supplemental appeal brief filed on June 8, 2007, Ohno does not teach or suggest this recited limitation of claim 1. Instead, Ohno discloses storing video code 405 <u>corresponding to</u> each video buffer descriptor 401. Col. 9, lines 19-29. The type of recording disclosed by Ohno, which is recording data corresponding to descriptors, cannot reasonably be said to anticipate the limitation of claim 1, because data which is recorded "corresponding to" descriptors is recorded <u>depending on</u>, not recorded independently from, descriptors. Ohno therefore discloses data which is recorded "corresponding to," or depending on, descriptors, or at the very least, does <u>not</u> disclose data which is recorded independently from descriptors.

Apparently in response to this argument, the Examiner has reopened prosecution and rejected claims 1-40 using the additional reference of Otomo. In the rejection, the Examiner

argues that Otomo teaches "the ability to store and record first and second program descriptor tables that provide links between the two stored tables as seen in FIG. 13. The information stored on the directory provides independently recorded information that is linked to another independently recorded media." Further, the Examiner states in the rejection that "it would be obvious to one of ordinary skill in the art to use the recording medium, as disclosed by Lee et al, and further incorporate a system allows independently recording descriptor tables, as recited by Ohno, and further incorporate a system to record the first and second program descriptor tables independently, as taught by Otomo et al, to allow for a more efficient storage and reproducing of data through the use of descriptor tables."

First, the applicants maintain that Ohno does not teach any kind of descriptor tables which are independently recorded of data units. Instead, Ohno discloses storing video code 405 corresponding to each video buffer descriptor 401. Col. 9, lines 19-29. Thus, the applicants maintain that Ohno does not teach this recited limitation of claim 1.

Second, Otomo does not teach or suggest the first and second program descriptor tables recited by claim 1. In the rejection, the Examiner cites to FIG. 13 of Otomo and argues "the information stored in the directory provides independently recorded information that is linked to another independently recorded media." Thus, according to the Examiner, the information stored in the directory, as taught by Otomo at col. 16, lines 5-55, teaches or suggests the first and second program descriptor tables recited by claim 1.

Otomo states the following: "AMG (audio manager) in the ATS directory mainly manages ATS, but can access not only ATS in the ATS directory but also VTS in the VTS directory." Col. 16, lines 7-10. Additionally, Otomo further states that "in the example shown in FIG. 13, information (e.g., a pointer indicating the address of a predetermined portion of VTS #1) for linking to a certain video title set (VTS #1 in this case) is written in a certain audio set (ATS #1 in this case)." Col. 16, lines 34-38. Furthermore, FIG. 13 of Otomo illustrates an arrow protruding from <ATS #1> to audio in <VTS #1> symbolizing the linkage between the audio and video contents in the audio set ATS #1 and video set ATS #1. Directly below this above-quoted passage, Otomo goes on to state the following:

> "The principle of the data structure shown in FIG. 14 is to independently record the recording area (VMG + VTS) for the video contents and the recording area (AMG + ATS) for the audio contents in volume space 28." Col. 16, lines 48-53.

This paragraph teaches independently recording the video contents and the audio contents from each other. Thus, as shown in FIG. 13, the VTS directory in the video contents

side appears to be recorded independently from the ATS directory in the audio contents side. Then, link info recorded in <ATS #1> links <ATS #1> to <VTS #1>, thereby enabling "a certain object (e.g., VTS #1)" to be "shared by both the video and audio contents." Col. 16, lines 20-23.

However, claim 1 recites that "the first and second program descriptor tables are recorded independently of... the first and second data units." Otomo does not teach that the information in the ATS directory is recorded independently of the audio contents, or that the information in the VTS directory is recorded independently of the video contents. Instead, Otomo suggests that the video contents and the audio contents are recorded together with the information in their corresponding VTS and ATS directories. For example, Otomo uses the symbols "(VMG + VTS)" and "(AMG + ATS)" when describing the recording operation, suggesting that the VMG and VTS are recorded together, and the AMG and ATS are recorded together. Additionally, as noted above, Otomo states that "information (e.g., a pointer indicating the address of a predetermined portion of VTS #1) for linking to a certain video title set (VTS #1 in this case) is written in a certain audio set (ATS #1 in this case) (emphasis added)." Col. 16, lines 35-39. Information which is "written into" the ATS #1 is not information which is recorded "independently" of the audio contents in the ATS #1.

Thus, Like Ohno, Otomo does not teach or suggest that the information in the ATS directory is recorded independently from the audio contents, or that the information in the VTS directory is recorded independently from the video contents. Claim 1 of the instant application, on the other hand, recites that "the first and second program descriptor tables are recorded independently of... the first and second data units." Accordingly, it is respectfully submitted that both Ohno and Otomo do not teach or suggest this recited limitation of claim 1.

Claims 5, 10, 16, 22, 27, and 35

In addition to the reasons argued above, it is respectfully submitted that the combination of Lee, Ohno and Otomo do not teach each of the recited limitations of claims 5, 10, 16, 22, 27, and 35. Claims 5, 10, 16, 22, 27, and 35 each recite the limitation that when the information on the first data unit in the second program descriptor table is not the same as the corresponding information on the first data unit in the first data unit descriptor table, the information on the first data unit in the second program descriptor table is updated so that the information is the same as the information on the first data unit in the first data unit descriptor.

As previously argued by the applicants in the supplemental appeal brief filed on June 8,

2007, the Examiner has not shown where Lee et al discloses the limitations recited in claims 5, 10, 16, 22, 27, and 35. Col. 7, lines 7-50 of Lee discloses first index data 24c of the first programs related to the second area. This first index data 24c is used to sequentially record a plurality of first programs in a first data area 18. Col. 7, lines 15-17. Lee does not teach or suggest that when this first index data 24c does not match corresponding information on a first data unit in a first data unit descriptor, the first index data 24c is <u>updated</u> to be the same as the corresponding information, as recited in claims 5, 10, 16, 22, 27, and 35.

In fact, Lee does not teach or suggest that the first index data 24c <u>itself</u> is updated in any way whatsoever. Instead, Lee describes how the first index data 24c is used as follows: "For example, if first data is MIDI data of a certain musical piece, the first index data is for accessing the corresponding first programs of the first data area in order to construct a background screen which changes for every measure of the musical piece." Col. 7, lines 39-44. Lee describes the first index data as something used to access programs, not something which is itself updated. Although the programs which the first index data is used to access may be updated, claims 5, 10, 16, 22, 27, and 35 recite updating information on the first data unit in the second program descriptor table when the information on the first data unit in the second program descriptor table is not the same as the corresponding information on the first data unit in the first data unit descriptor table, and Lee does <u>not</u> disclose any such updating. Thus, it is respectfully submitted that the Examiner has not provided sufficient evidence to maintain a *prima facie* obviousness rejection of claims 5, 10, 16, 22, 27, and 35 and that these rejections should be withdrawn for at least these reasons as well.

Claims 29 and 37

In addition to the reasons argued above, it is respectfully submitted that the combination of Lee, Ohno and Otomo do not teach each of the recited limitations of claims 29 and 37. Claims 29 and 37 both recite the limitation that the "memory is embedded in the first signal processor."

As previously argued by the applicants in the supplemental appeal brief filed on June 8, 2007, the Examiner has not shown where Lee et al discloses the limitations recited in claims 29 and 37. Figure 10 of Lee appears to depict the memory 300 located <u>outside</u> of the MCPU 200. The memory 300 is connected to the MCPU 200 by arrows indicating a transfer of data and index table information output from the MCPU 200 to the memory 300, as described in Lee,

column 8, lines 34-38. Additionally, Lee discloses that the memory 300 is a RAM. Column 8, lines 44. RAMs are not generally designed to be embedded within hardware such as signal processors. Thus, it is respectfully submitted that the rejection of claims 29 and 37 should be withdrawn for at least this reason.

Claim 40

In addition to the reasons argued above, it is respectfully submitted that the combination of Lee, Ohno and Otomo do not teach each of the recited limitations of claim 40. Claim 40 recites "a data structure for synchronizing reproduction of data units of a first type with reproduction of a data unit of a second type from a recording medium, the data structure comprising: a first table which relates first data unit descriptors with the first data units, respectively; a second table which relates second data unit descriptors with the second data units, respectively; and a third table which enables synchronization of predetermined ones of the first data units with predetermined ones of the second data units by reference to corresponding ones of the first and second data unit descriptors, wherein the third table is stored independently of the first and second data unit descriptors and the first and second data units."

As previously argued by the applicants in the supplemental appeal brief filed on June 8, 2007, the Examiner has not shown where Lee et al discloses the limitations recited in claim 40. Col. 2, lines 50+ of Lee does not disclose the third table recited by claim 40. Instead, Col. 2, lines 64-66 discloses "storing the corresponding second program in a third memory (emphasis added)." Lee specifically describes this third memory as a RAM. Col. 8, line 44. A RAM, which is a piece of hardware, clearly does not anticipate a third table which enables synchronization of predetermined ones of the first data units with predetermined ones of the second data units by reference to corresponding ones of the first and second data unit descriptors, wherein the third table is stored independently of the first and second data unit descriptors and the first and second data units. Thus, it is respectfully submitted that the Examiner has not shown where Lee discloses each of the limitations recited by claim 40, and for this reason, the rejection of claim 40 should be withdrawn.

Claims 2-4, 6-9, 11-15, 17-21, 23-26, 28, 30-34, 36, and 38-39

It is respectfully submitted that the rejections of claims 2-4, 6-9, 11-15, 17-21, 23-26, 28, 30-34, 36, and 38-39 should be withdrawn for at least the same reasons that the rejection of

claim 1 should be withdrawn.

II.   One Skilled In The Art Would Not Have Been Motivated To Combine Lee, Ohno and Otomo To Arrive At The Claimed Invention

Assuming *arguendo* that the prior art teaches or suggests each of the elements recited in claims 1-40, it is respectfully submitted that the Examiner has still not established a *prima facie* case of obviousness because the Examiner has not shown where the prior art suggests the desirability of the claimed invention. To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine teachings. MPEP 2143.

In the Office Action at page 3, the Examiner argued that the prior art discloses a sufficient motivation to combine Lee, Ohno, and Otomo to arrive at the invention recited in claim 1, because "it would be obvious to one of ordinary skill in the art to use the recording medium, as disclosed by Lee et al, and further incorporate a system allows independently recording descriptor tables, as recited by Ohno, and further incorporate a system to record the first and second program descriptor tables independently, as taught by Otomo et al, to allow for a more efficient storage and reproducing of data through the use of descriptor tables."

It is respectfully submitted that the Examiner has not provided any evidence as to why one skilled in the art would have been motivated to combine the compact disc (CD) of Lee with the PC-based teleconference terminal of Ohno and the digital versatile disc (DVD) of Otomo to arrive at the invention recited in claim 1.

By way of review, Lee is directed towards a CD having a diameter of 12 cm and a maximum capacity of 800 megabytes. Col. 1, lines 11-14. Ohno is directed towards a "pc-based teleconference terminal" which includes a main memory composed, for example, of DRAM. Col. 6, lines 65-66. Otomo is directed towards a DVD, for example, a DVD-R using a semiconductor laser having a wavelength of 650 nm and an output of about 6 to 12 mW.

Thus, Lee is directed towards a low density optical disk, Otomo is directed towards a high density optical disk, and Ohno is directed towards a DRAM. These three types of technologies are different from each other in a number of ways. A CD stores substantially less information than a DVD, uses a larger wavelength than the wavelength used to record information on a DVD, may be made of totally different recording materials than a DVD, has a

thicker recording layer than a DVD, and stores data differently than the DVD standard specifications. A DRAM, moreover, does not involve optical technology at all. Instead, DRAMs are volatile memories consisting of capacitors and transistors.

One skilled in the art would not have been motivated to combine these three different types of technologies, which are provided for different purposes, to arrive at the invention recited by claim 1. The Examiner has not cited to any evidence, such as, for example, a teaching in the prior art, that one skilled in the art would have been motivated to use descriptor tables for "more efficient storage and reproducing of data."

Based on the foregoing, this rejection is respectfully requested to be withdrawn.

CONCLUSION:

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Response, please charge the same to our Deposit Account No. 503333.

Respectfully submitted,

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